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10/803,803	03/18/2004	Lauren Keilbach	4316/048	5613

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EXAMINER	
GWARTNEY, ELIZABETH A	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,803	KEILBACH, LAUREN	
	Examiner	Art Unit	
	Elizabeth Gwartney	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) *31-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20040416*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-30 in the reply filed on May 8, 2008 is acknowledged.

2. Claims 31-63 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "23" of Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 12 and 15 are objected to because it is of improper Markush group format. A Markush-type claim recites alternatives in a format such as "selected from the group

consisting of A, B and C." See Ex parte Markush, 1925 C.D. 126 (Comm'r Pat.1925).

See MPEP 803.02. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 3, 5, 7-14, 17-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cinquemani (US 4,239,782) in view of Crews (US 6,207,202) and Zimmerman et al. (US 6,352,730).

Regarding claims 1, 3, 5, 8, 10, 12, 14, 21, 23-25 and 28, Cinquemani discloses a composition for making fish food flakes comprising the steps of (C2/L3-12):

- preparing a slurry that includes fishmeal, rice starch, vitamins, oil, pigmenting agent, and water (C2/L8, 50-61) wherein said pigmenting agent is a carotenoid such as B-carotene (C1/L41-48).
- forming the slurry into flakes (C2/L10-12).

While Cinquemani fish food flakes made with vitamins (i.e. nutritional ingredient) and a pigmenting agent/colorant (C1/L41-48, C2/L50-61), the reference is silent regarding heating to dry the slurry, breaking the dried slurry to form flakes, and applying a solution containing nutritional ingredients and pigmenting agent/colorant to the slurry as it is drying.

Crews teaches a common method for preparing a flaked fish food that includes preparing a fish protein, vitamin and water slurry (Abstract, Fig. 1), heating and drying the slurry with a drum drier at a temperature of between 260° and 360° F (Fig. 1, C3/L12), and breaking the dried slurry in order to form flakes (C3/L17-19). Crews also discloses that the slurry is heated to a temperature sufficient to bind (i.e. gel) the fish proteins (C3/L6-19) or a fish meal and flour combination (C1/L13-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the drum drying method, as taught by Crews et al., to form the fish food preparation of Cinquemani into flakes because doing so would amount to nothing more than the use of a known flaking method for its intended use in a known environment to accomplish entirely expected results.

Zimmerman et al. teach a method of fortifying food products with fat soluble and water soluble vitamins (i.e. A,B,C,E, and K) by spraying onto food products, post heating, a solution containing an edible oil base and vitamins suspended therein. (C2/L66-C3/L4, C14/14-49). Zimmerman et al. teach that many ingredients are heat sensitive and application post heating preserves the integrity of the ingredients (C2/L18-22). Zimmerman et al. also teach that the ingredient suspension is sprayed by means of

one or more spray nozzles to a heated food product when the product is at a temperature between 240°F and 260°F (C20/L65-67, C25/L26-27).

Modified Cinquemani and Zimmerman et al. are combinable because they are both concerned with the same field of endeavor, namely, nutrient fortification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to fortify the fish food slurry of modified Cinquemani by spraying a solution containing vitamins onto the surface of the slurry post heating, as taught by Zimmerman et al., for the purpose of preventing heat degradation and preserving the quality of the vitamins.

Regarding claim 9, modified Cinquemani discloses all of the claim limitations as set forth above. Cinquemani does not disclose that the particle size of the vitamins or carotenoid are no greater than 150 microns. Zimmerman et al. teach that the particle size of the additive ingredients can be varied with the maximum size governed by the inner diameter of the application apparatus (C15/L24-27). Zimmerman et al. teach that the particle size should be chosen to provide the food product with a uniform surface of appearance and consistency (C15/L28-31). As spraying efficiency and surface uniformity are variables that can be modified by adjusting the particles size of the vitamins or carotenoid, the precise particle size would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the particle size of the vitamins or carotenoid cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the particle size the vitamin or carotenoids in the coating solution of modified Cinquemani to obtain the desired surface appearance and spraying efficiency (In re Boesch, 617 F.2d.

272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claims 11, 19-20 and 22, modified Cinquemani discloses all of the claim limitations as set forth above. Modified Cinquemani does not disclose that the solution is applied onto the drying slurry for a time period of between 1 and 4 seconds at a spray flow rate of between 0.5 and 0.7 lbs. of said solution per minute. Further, modified Crews does not disclose that the solution is sprayed onto the drying slurry at a fluid pressure of between about 45 and 75 p.s.i or that the spray nozzles have an applied air pressure of between about 70 and 90 p.s.i. As coverage is a variable that can be modified, among others, by adjusting the spraying time, flow rate, and pressure, the precise spraying parameters would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the spraying parameters cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the spraying time, flow rate, and pressure in the coating process of modified Cinquemani to obtain the desired nutrient coverage (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claims 13 and 18, modified Cinquemani discloses all of the claim limitations as set forth above. Given that modified Cinquemani discloses that the

nutritional ingredients comprise carotenoids (C1/L45-46) and not vitamin C specifically, the limitations of claims 13 and 18 are met.

Regarding claim 17, modified Cinquemani discloses all of the claim limitations as set forth above but the references do not disclose that the fish meal and flour are pulverized to a particle size of not greater than 150 microns. As the smoothness and thickness of the fish flakes are variables that can be modified by adjusting the particles size of the fish meal and flour, the precise particle size would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the particle size of the fish meal to flour cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the particle size of fish meal and flour in the fish flake slurry of modified Cinquemani to obtain the desired flake smoothness and thickness (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claims 26-27, modified Cinquemani discloses all of the claim limitations as set forth above, however, the references are silent with regards to the ratio of fish meal to flour. As flake integrity and protein content are variables that can be modified by adjusting the amount of fish meal and flour in the fish flake slurry, the precise ratio of fish meal to flour would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the ratio of fish meal to flour cannot be considered

critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of fish meal and flour in the fish flake slurry of modified Cinquemani to obtain the desired balance between protein content and flake integrity (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claims 29-30, modified Cinquemani discloses all of the claim limitations as set forth above. While Crews discloses that the dried flakes are removed from the drum dryer using a knife blade (C3/L17-18), the reference does not explicitly disclose that the breaking step is carried out by mean of a rotating screw or a screen.

A skilled artisan would know that a rotating screw or a screen could be used to break up flakes made of a drum dryer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a rotating screw or a screen to break up the fish flakes of modified Cinquemani because doing so would amount to nothing more than the use of known methods to break flakes for their intended use in a known environment to accomplish entirely expected results.

8. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) unpatentable over Cinquemani (US 4,239,782) in view of Crews (US 6,207,202) and Zimmerman et al. (US 6,352,730) as applied to claim 1 above, and further in view of Kürzinger et al. (US 6,426,101).

Regarding claims 2 and 6, modified Cinquemani discloses all of the claim limitations as set forth above however, the references do not explicitly disclose that the slurry is prepared having a water content between about 70 and 80 weight percent and solid content of between about 20-30 weight percent or that the heating step dries the slurry to a moisture content of between 2 and 10 weight percent.

Kürzinger et al. teach that a drum drying process is commonly used to make fish flake feed. Drum drying is a process for the drying of raw material mixtures which are made liquid to pasty by the addition of water. Kürzinger et al. teach that a paste (i.e. slurry) having a moisture content of about 75% is passed over heated rollers to make a thick film. During the rotary movement, the water evaporates and the dried product is removed with a moisture content of about 2 to 5% (C1, L36-46). Kürzinger et al. teach that the final moisture content plays an important part for the technical properties, especially the brittleness of the feed flakes (C1/L46-50).

Modified Cinquemani and Kürzinger et al. are combinable because they are concerned with the same field of endeavor, namely, making fish flake feed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the fish flake feed of modified Cinquemani by making a slurry with a water content of about 75% and drying it to a moisture content of between about 2 and 5%, as taught by Kürzinger, for the purpose of controlling the final moisture content of the fish flakes and therefore producing flakes with desired technical properties including desired brittleness.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cinquemani (US 4,239,782) in view of Crews (US 6,207,202) and Zimmerman et al. (US 6,352,730) as applied to claim 1 above, and further as evidenced by Schmidt et al. (CA 2 376 300).

Regarding claim 4, modified Cinquemani discloses all of the claim limitations as set forth above. Cinquemani does not disclose that the slurry includes between 1 and 2 weight percent oil, between about 7 and 10 weight percent fish meal, and between about 5 and 7 weight percent flour.

Regarding oil, Schmidt et al. teach that fat (i.e. oil) is a source of energy in fish feeds (page 1/Description/P1). As energy content is a variable that can be modified by adjusting the amount of oil in the fish flake feed, the precise amount of oil would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the amount of oil cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of oil in the fish flake feed of modified Cinquemani to obtain the desired energy content (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding fish meal and flour content, as flake integrity and protein content are variables that can be modified by adjusting the amount of fish meal and flour in the fish flake slurry, the precise amount of fish meal and flour would have been considered a

result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the amount of fish meal and flour cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of fish meal and flour in the fish flake slurry of modified Cinquemani to obtain the desired balance between protein content and flake integrity (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

10. Claims 15-16 are rejected under 35 U.S.C. 103(a) unpatentable over Crews (US 6,207,202) in view of Zimmerman et al. (US 6,352,730) as applied to claims 1 and 12 above, and further in view of Prochnow et al. (US 5,827,551).

Regarding claims 15-16, modified Cinquemani discloses all of the claim limitations as set forth above but the references doe not disclose that the nutritional ingredients further include an attractant wherein the attractant is betaine.

Prochnow et al. teach using chemical attractants, including betaine, on fishing lures to attract the fish to bite on the bait (C1/13-14, 21-23, C2/L32-43).

Modified Cinquemani and Prochnow et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for fish. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added betaine, a chemical fish attractant, as taught by Prochnow et al., to the fish flake

coating of modified Cinquemani for the purpose of making it easier for fish to find the food by attracting fish to the food.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gwartney whose telephone number is (571) 270-3874. The examiner can normally be reached on Monday - Thursday;7:30AM - 5:00PM EST, working alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. G./
Examiner, Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794